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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,205	04/06/2004	Daniel Scott Woodman	22090-3	7418

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EXAMINER	
LUKS, JEREMY AUSTIN	
ART UNIT	**PAPER NUMBER**
2837	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/820,205	WOODMAN ET AL.	
	Examiner	Art Unit	
	Jeremy Luks	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11,13-20 and 22-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11,13-20 and 22-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 3-11, 13-20 and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop (4,476,183) in view of Juriga (5,536,556) and Orimo (5,817,408).

With respect to Claims 1, 3, 10, 11, 13, 20, 22, 23 and 26, Holtrop discloses a non-foam porous fiber reinforced thermoplastic core layer (Figure 2, #13) (Col. 4, Lines 28-31) comprising a thermoplastic material (Col. 3, Lines 36-37), said core layer (13) having a first surface and a second surface; a tie layer (16) covering said second surface of said core layer (13); a barrier layer (12) covering said tie layer (16), said tie layer (16) bonding said barrier layer (12) to said core layer (13) (Col. 3, Lines 50-55); and a fabric layer (21) comprising a non-woven fabric bonded (18) to said barrier layer (12) (Col. 5, Lines 3-10), said fabric layer (21) forming an outer surface of a panel (10); and a decorative layer (Figure 2, #25) bonded to a first surface of a core layer (13).

Holtrop fails to teach wherein the thermoplastic core layer comprises a thermoplastic material having from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc; a tie layer comprising a

thermoplastic material; and an air permeable barrier layer comprising a non-permeable thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material; a decorative layer comprises a thermoplastic film comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer; a tie layer having a low melting temperature covering a second surface of a core layer, and said tie layer bonding a barrier layer to said core layer; and a barrier layer having a melting temperature higher than that of the tie layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the thermoplastic core layer from a thermoplastic material having from about 20 weight percent to about 80 weight percent fibers, and a density from about 0.2 gm/cc to about 1.8 gm/cc, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Juriga teaches a tie layer (Figure 2, #42) comprising a thermoplastic material (Col. 6, Lines 27-35); a decorative layer (Figure 4, #28) comprises a thermoplastic film (50) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 8, Lines 10-25); a tie layer (Figure 2, #42) having a low melting temperature (Col. 6, Lines 20-23) covering a second surface of a core layer (36), and said tie layer (42) bonding a barrier layer (38) to said core layer (36). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop as modified, with the apparatus of Juruga to provide a

thermosetting adhesive to the structure that will bond and harden after being heat molded to secure the various layers in the molded absorber to one another, and be able to withstand heat distortion or deterioration.

Orimo teaches an air impermeable barrier layer (Figure 1, #26) comprising a non-permeable thermoplastic material (Col. 4, Lines 18-46) having a melting temperature higher than the melting temperature of a core layer (24) thermoplastic material (Col. 3, Lines 23-40) (Col. 4, Line 63- Col. 6, Line 6); and a barrier layer (Figure 1, #26) having a higher melting point (Col. 6, Lines 27-31) than that of a tie layer (Col. 6, Lines 1-20) and when used in combination. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Holtrop as modified, with the apparatus of Orimo to improve sound insulation characteristics, as well as protect the sound absorbing layers from damage.

With respect to Claims 4-6, 8, 9, 14-16, 18, 19, 24, 25 and 27, Holtrop teaches a decorative layer (Figure 2, #25) comprising a layered laminate comprising a foam core (14), an adhesive layer (19) between the core layer (13) and decorative layer (25) (Col. 5, Lines 50-53), and woven or non-woven fabric (22), said foam core (14) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31), and non-woven fabric (22) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 5, Lines 6-17). Holtrop fails to teach a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material. Juriga teaches a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material (Col. 6, Lines 27-35). It

would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop as modified, with the apparatus of Juruga to provide a thermosetting adhesive to the structure that will bond and harden after being heat molded to secure the various layers in the molded absorber to one another, and be able to withstand heat distortion or deterioration.

With respect to Claims 7 and 17, Holtrop discloses decorative layer (Col. 6, Lines55-58) comprising a layered laminate (Figure 3, #30) comprising a foam core (34), a non-woven batting (35), and woven or non-woven fabric (42), said foam core (34) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31; Col. 6, Lines 3-10), said non-woven batting (35) comprising at least one polyester material and polyamide fibers (Col. 6, Lines 2-3).

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3-11, 13-20 and 22-27 have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers the obvious combination of Holtrop, Juriga, and Orimo to teach all of the limitations as claimed by Applicant.

3. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, sufficient motivation was taken from the teaching of the references and the motivation would have been obvious to one of ordinary skill. ~~Omri~~ Orino teaches that the air-impermeability increases surface density, which improves sound insulating capabilities (Col. 4, Lines 25-46). The Examiner also considers the increased weight and strength described to further protect the other layers when used in combination. Further in regards to Juriga, the Examiner submits that it is well known that when once a thermoset resin is cured, it has a high resistance to damage from heat. (Also see previously sited reference Haussling, US Pat No. 5,068,001; Col. 5, Lines 27-31). The adhesive used to bond the layers in Holtrip is not described as a thermoset resin, and therefor the combination is proper.

5. With respect to Claims 1, 10 and 20; while Holtrip does suggest using an array of foamed materials for thermoplastic layer #13, Col. 4, Lines 28-31 teach that it is

possible to use polyester fibers or batts of polypropylene for the thermoplastic layer #13. The Examiner considers this to meet the newly added limitation of a **non-foam** porous fiber reinforced thermoplastic layer.

6. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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